

Remarks/Arguments:

Claims 1-16 stand rejected.

Claim 6 has now been canceled.

Applicants thank the Examiner for the opportunity to discuss claim 1 in view of Borg and for his helpful suggestions.

Section 102 Rejections:

Claims 1-16 have been rejected as anticipated by Borg. Applicants respectfully submit that these rejections are overcome for the reasons set forth below.

Amended claim 1 now includes features which are not suggested by the cited reference, namely:

- a video circuit that generates a video voltage **from each one of a group of pixels in each column of pixels**; and
- a reference circuit that generates **a unique reference voltage associated with each pixel in each row of pixels**;
- ...
- the reference circuit comprises a single reference amplifier **associated with all of the pixels in the groups and rows of pixels**, and
- the reference amplifier samples and holds the unique reference voltage **for each one of the pixels in the groups and rows of pixels**.

Basis for amended claim 1 may be found, for example, in the specification, at page 4, lines 2-3 and lines 9-10. As described therein, each video amplifier is associated with a column of pixels and the one reference circuit is associated with all the rows of pixels.

Borg discloses a pixel column amplifier architecture as illustrated in FIG. 1. As shown, reference column 102 is used to generate one-half of a difference image signal 118. The reference column pixels 12 are identical to others in the array, except that they use a different reset signal from row decoder 210. The reference pixel 12 for a given row, when not being read, is held in a reset state, thus integrating no light. When reference pixel 12 is selected, the pixel is optionally taken out of reset and reference column amplifier 240 is driven to a reset pixel level, while all column amplifiers 230 are driven to a level proportional to the incident light striking that pixel in each column of the selected row. During column readout, the output of reference column amplifier 240 is always selected to provide one-half of the difference image signal 118, while the remaining outputs of column amplifier 230 are sequentially selected to provide the other one-half of difference image signal 118.

Borg, however, does **not** suggest the features now recited in amended claim 1, namely, that **a reference circuit generates a unique reference voltage associated with each**

pixel in each row of pixels. Furthermore, Borg does **not** suggest a **reference amplifier that samples and holds the unique reference voltage for each one of the pixels in the groups (or columns) and rows of pixels.**

Although not the same, independent claims 5, 10, and 13 have been amended to include features similar to amended claim 1. Each one of these independent claims now clearly recites that **the reference circuit samples and holds a unique reference voltage as each video voltage of each pixel in a row of pixels is read.** These independent claims are, therefore, not subject to rejection in view of the cited reference for the same reasons set forth above for amended claim 1.

Dependent claims 2-4 depend from amended claim 1. Dependent claims 7-9 depend from amended claim 5. Dependent claims 11-12 depend from amended claim 10. Dependent claims 14-16 depend from amended claim 13. These dependent claims are, therefore, not subject to rejection in view of the cited reference for at least the same reasons set forth above for amended claim 1.

Conclusion

The application is now in condition for allowance.

Respectfully submitted,



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